

Osprey



Funding for SECDEF Blue Ribbon Panel

12 January 2001

**PMA-275
Ms. Dana V. Harrison**



Outline



- I. Total Program Costs**
- II. Procurement**
- III. RDT&E**
- IV. Contract Cost and Schedule Performance**
- V. Total Ownership Cost**



V-22 Total Program Costs (MS III Adj Estimates)



(\$M, Then Years)

RDT&E Costs (MV and CV)

FSD/Pre-EMD		\$2,374.2	(FY82 - 91)
Post-FSD/EMD		<u>5,001.6</u>	(FY92 - 07)
Total RDT&E		\$7,375.8	

Procurement Costs

Navy (MV/HV-22)	409 A/C	\$28,085.0	(FY89, 96-14)
Air Force		\$4,044.8	(FY99-10)
USSOCOM		<u>1,607.4</u>	(FY99-10)
Subtotal CV-22	50 A/C	\$5,652.2	
Total Procurement	459 A/C	\$33,737.2	

Military Construction Costs

Navy	\$20.2
USSOCOM	<u>23.8</u>
Total MILCON	\$44.0

Total Program Costs **\$41,157.0**



V-22 Baseline Cost Status (\$M)



<u>FY 1986 BY \$</u>	<u>Objective</u>	<u>Threshold</u>	<u>Cur. Est.</u>
Total RDT&E	5562.5	6396.9	5937.1
Total Procurement	21441.7	22513.8	20795.6
Total MILCON	34.5	50.0	29.1
APUC	40.998	47.148	45.306
	<u>APB Baseline</u>	<u>MS III Adj DEC 00</u>	<u>% Change</u>
Program Acquisition Unit Cost (PAUC)			
(1) Cost (FY 1986 BY \$)	27038.7	26761.8	
(2) Quantity	523	459	
(3) Unit Cost	51.699	58.305	+12.778
Average Procurement Unit Cost (APUC)			
(1) Cost (FY 1986 BY \$)	21441.7	20795.6	
(2) Quantity	523	459	
(3) Unit Cost	40.998	45.306	+10.51



V-22 Total Program Cost Changes



(\$M, Then Years)

	<u>Cost</u>	<u>Change</u>
AUG 95 APB	52,955.4	-
DEC 95 SAR	46,599.7	-6,355.7
DEC 96 SAR	45,528.0	-1,071.7
DEC 97 SAR	37,334.4	-8,193.6
DEC 98 SAR	36,220.3	-1,114.1
DEC 99 SAR	38,112.2	+1,891.8
DEC 00 MS III Adj	41,157.0	<u>+3,044.8</u>
Total Change		-11,798.4



Total Program Cost Changes Explanation



DEC 95	<u>-6.4B</u> -6.0B Escalation -0.4B Support/Misc.	DEC 99	<u>+1.9B</u> +2.3B Revised Labor Rates, Material Costs, Misc. +0.1B Schedule -0.2B Escalation -0.3B Support
DEC 96	<u>-1.1B</u> +1.6B Escalation -1.6B Schedule - Shortened Procurement 3 Years - Increased Max MV-22 Rate from 20 to 24 Aircraft -1.1B Support - Definition of Requirements	DEC 00	<u>+3.0B</u> <u>+1.2B</u> <u>MV/HV-22 Procurement</u> +1.6B Labor and Material Increases -0.6B CRI Savings +0.3B Schedule and Quantity (+1 A/C) -0.1B Support <u>+1.6B</u> <u>CV-22 Procurement</u> +0.6B Labor and Material Increases -0.1B CRI Savings +0.2B Schedule +0.5B Support-Basing Plan/Strategy +0.4B Added Capability - Block Changes
DEC 97	<u>-8.2B</u> -3.1B Reduced 65 MV-22 Aircraft -1.6B Accelerated 11 A/C Into FYDP - Increased Max MV-22 Rate from 24 to 30 Aircraft -0.7B Escalation -2.8B Support - Associated with Quantity Reduction and Schedule Rephasing		<u>+0.2B</u> <u>RDT&E</u> - Added Capability CV-22 P3I and MV-22 ECS
DEC 98	<u>-1.1B</u> -0.5B Escalation -0.3B Schedule - Shortened Procurement 4 Years -0.4B Support - Refinement of Estimates +0.5B Inflation Assumptions +0.7B Added Capability - Gun and CV-22 P3I -1.1B Acquisition Reform - MYP, Commercial Engine, Flat Panel Displays		



V-22 Procurement Costs



V-22 Procurement Cost Changes (\$M, Then Years)

	Total Procurement			
	<u>Cost</u>	<u>Change</u>	<u>Qty</u>	<u>APUC</u>
AUG 95	45,956.9	--	523	87.87
DEC 95	39,660.1	-6,296.8	523	75.83
DEC 96	38,557.7	-1,102.4	523	73.72
DEC 97	30,279.3	-8,278.4	458	66.11
DEC 98	29,021.8	-1,257.5	458	63.37
DEC 99	30,861.3	+1,839.5	458	67.38
MS III Adj	33,737.2	<u>+2,875.9</u>	459	73.50
Total Change		-12,219.7		

V-22 Procurement Cost Changes Explanation (\$M, Then Years)

Escalation	-5,880.3
Deleted 64 Aircraft	-3,067.5
Revised Schedules	-3,071.8
Acquisition Reform	-1,047.2
Support/Misc.	-3,406.4
ADDED CAPABILITY	+1,011.2
Estimating	<u>+3,242.3</u>
Total Change	-12,219.7



V-22 RDT&E Costs



V-22 RDT&E Cost Changes

(\$M, Then Years)

	<u>Cost</u>	<u>Change</u>
AUG 95	6,951.0	--
DEC 95	6,897.0	-54.0
DEC 96	6,919.7	+22.7
DEC 97	7,001.6	+81.9
DEC 98	7,149.3	+147.7
DEC 99	7,197.0	+47.7
SEP/DEC00	7,375.8	<u>+178.8</u>
Total Change		+424.8

V-22 RDT&E Cost Changes Explanation

(\$M, Then Years)

Airframe/Engine Cost Growth	+149.0
Added Capability:	
Gun	+125.0
Improved ECS	+50.0
CV-22 P3I	+282.8
Misc./Fact-of-Life/Escalation	<u>-182.0</u>
	+424.8



V-22 Sunk/Remaining Funding



(\$M, Then Years)

RDT&E

Sunk	\$6,879.2
Remaining	<u>496.6</u>
Total RDT&E	\$7,375.8

Procurement

Sunk	\$5,567.0
Remaining	<u>28,170.2</u>
Total Procurement	\$33,737.2

MILCON

Sunk	\$6.6
Remaining	<u>37.4</u>
Total MILCON	\$44.0

Total

Sunk	\$12,452.8
Remaining	<u>28,704.2</u>
Grand Total	\$41,157.0



V-22 PERFORMANCE OVERVIEW

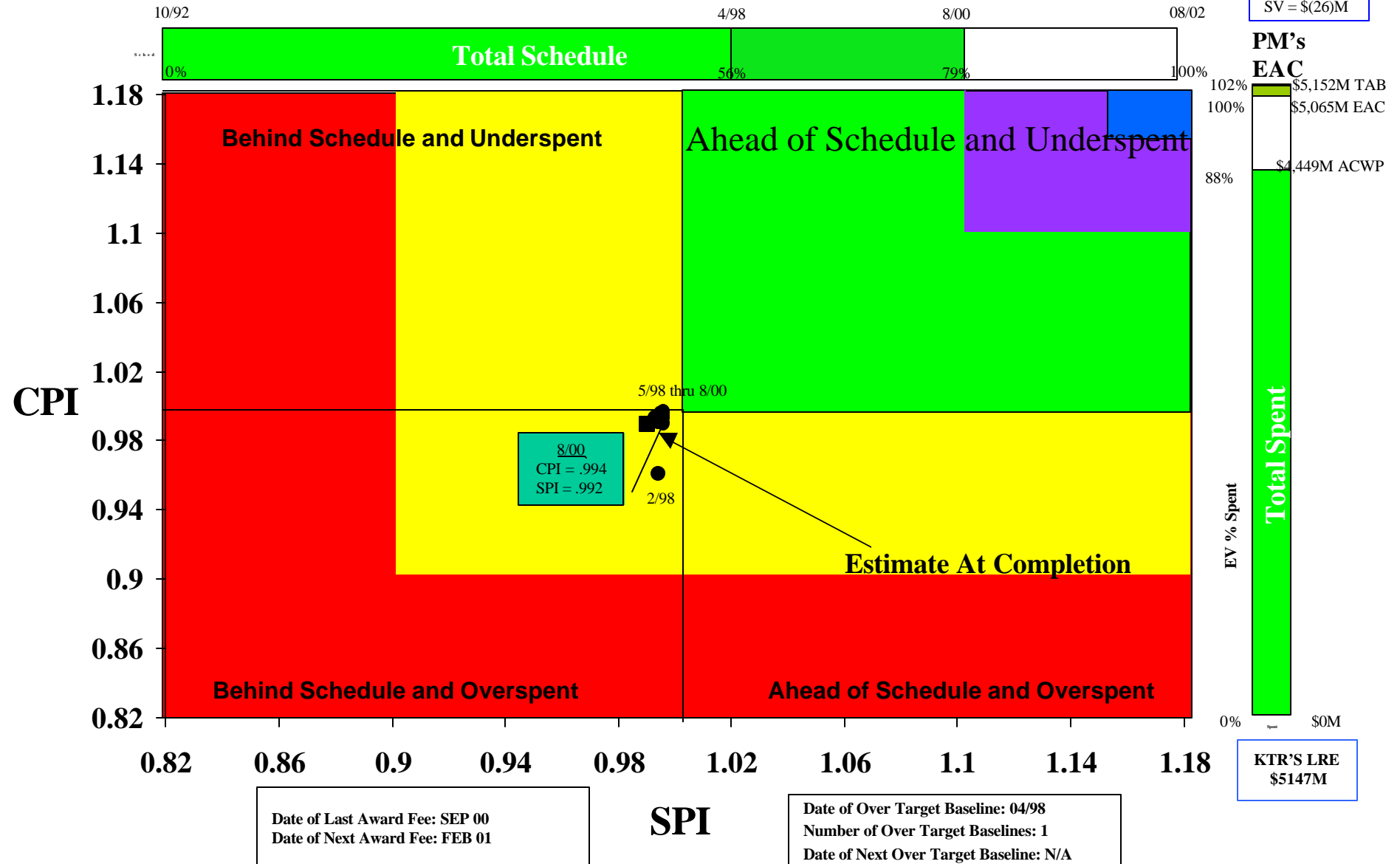
PROGRAM SUMMARY



PM/Office: Col. Nolan Schmidt, PMA-275

Date of Review: 04 DEC 00

TCPI = 0.93
EAC
CV = \$(35)M
SV = \$(26)M





Contract Cost Performance



EMD Airframe (CPAF)

Price = \$3,524M

Est. Cost = \$3,310M

- CPI = 0.99
- SPI = 0.99
- \$130M Overrun Funded

LRIP Airframe Lot 1 (CPIF/CPFF)

Price = \$546M

Est. Cost = \$475M

- CPI = 1.03
- SPI = 1.00

LRIP Airframe Lot 2 (CPIF/CPFF)

Price = \$595M

Est. Cost = \$532M

- CPI = 1.00
- SPI = 0.99

LRIP Airframe Lot 3 (CPIF/CPFF)

Price = \$549M

Est. Cost = \$496M

- CPI = 0.96
- SPI = 0.99



Contract Cost Performance



LRIP Airframe Lot 4 (FPI)

- Target Price = \$691M
- Target Cost = \$610M

Production Engine Lot 1-5 (FFP)

- Price = \$230M
- Qty = 121 Engines (including spares)



Total Ownership Cost (TOC) V-22 Summary



PM/Office: Col. Nolan Schmidt, PMA-275

Date of This Review: 04 DEC 00

Top 10 Cost Drivers	Top 10 TOC Initiatives	ROI
Manufacturing Labor	*1. Multi-Year Procurement	1. Projected \$400M (FY99\$) savings
Material	*2. Constant Frequency Generator	2. Over 100 Times ROI
Rates (Overhead)	*3. Digital Map Redesign	3. EFW Map Cost Cut in Third
Mission Personnel	*4. Display (Conversion to Flat Panel)	4. Nearly \$500M (TY\$) savings
Unit Level Consumption	*5. Commercial Engine Support	5. Over \$500M (FY96\$) avoided
Intermediate Level Maintenance	6. Nacelle Blower Fan Reliability Improv.	6. Three times ROI
Depot Level Repair	7. Blade Fold Wing Stow in 120sec vice 90sec	7. Saved Re-design and Re-qual of Engine
Sustaining Support	8. Begin Refuel Probe install in FY02 vice FY04	8. Reduce retrofit cost
Indirect Support	*9. Initiatives funded in POM02:	9. Over \$140M (TY\$) savings/avoidance
Procurement Profile	- SDC Impeller Improvement	10. Goal: To significantly reduce recurring flyaway cost - Projected \$700M (TY\$) savings linked with MYP
	- Battery Improvement	
	*10. Cost Reduction Affordability Team (CRAfT)	

*Funded/Budgeted Initiatives